

# **OFFICE OF THE VICE PRESIDENT FOR RESEARCH**

## **ANNUAL REPORT**

**JULY 1, 2002 TO JUNE 30, 2003**

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### **INTRODUCTION**

The goal of the Vice President for Research Office (VPR) is to continue building quality research by creating an environment in which faculty and student researchers can achieve their full potential. Quality research is fostered partly through improving campus research infrastructure to serve researchers, but more importantly through building multidisciplinary research programs and partnerships, both on and off campus, thereby enhancing the university's capacity for excellence in research.

It is the mission of the VPR to provide an environment that facilitates and stimulates university related research, scholarship and creative activities by:

- Providing leadership to identify and pursue promising research opportunities.
- Providing resources to help recruit and retain outstanding faculty and student scholars.
- Improving research support services that are highly responsive and efficient.
- Fostering a culture of academic research integrity that discloses and manages conflicts-of-interest and conflicts-of-commitment, and that is consistent with federal regulations.
- Identifying, protecting, and where appropriate, commercializing intellectual properties for the benefit of author/inventors, the university, and society.

Core campus constituencies of the VPR are faculty, students, and unit administrators. Because deans, center directors, and department heads are most concerned with their respective units, the VPR must take a broader, campus wide perspective.

To advance university research, the VPR must be engaged with external constituencies, including local and state elected officials, as well as federal and industry funding partners. The VPR also needs to be actively engaged in professional networks and with societies that have as their mission the advancement of research. The VPR chairs the University Research Council, that consists of deans and major center directors, and which includes student and faculty representatives.

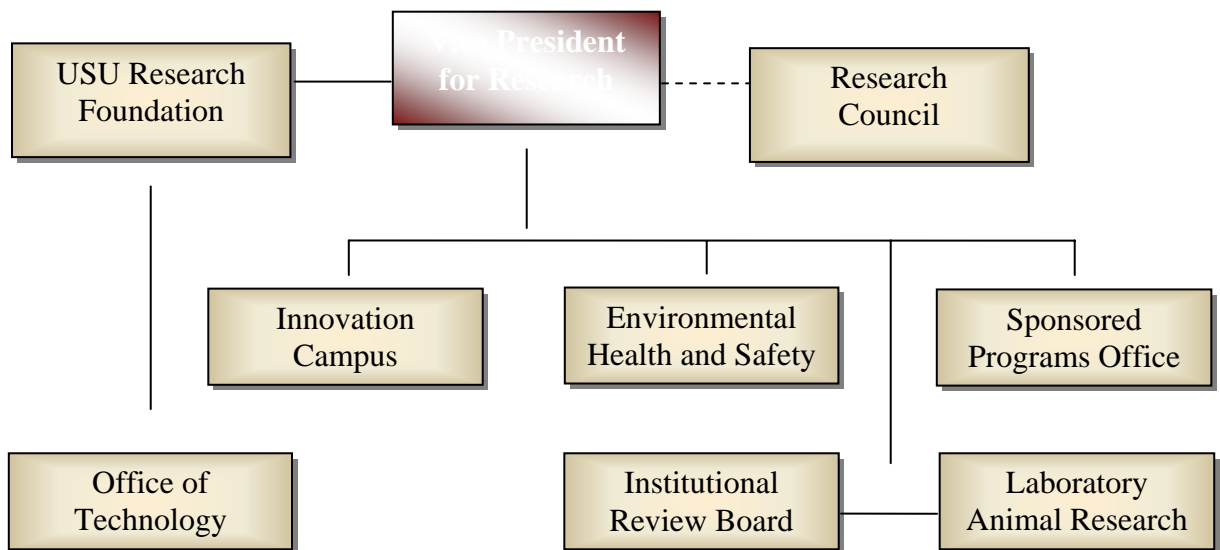
## ANNUAL REPORT

This annual report to the Faculty Senate covers the major activities of the VPR and the Research Council from July 1, 2002 through June 30, 2003. It is a summary of all units for which the VPR has responsibility. This report is organized in four parts:

1. Overview of VPR and Related Units
  - A. Service Units
    - 1) Sponsored Programs Office
    - 2) Environmental Health and Safety Office
    - 3) Institutional Review Board
    - 4) Laboratory Animal Research Center
  - B. Strategic Units
    - 1) Innovation Campus
    - 2) Office of Technology Commercialization
2. Research Council Membership and Functions
3. Use of Facilities and Administration (F&A) Funds at USU, FY2002-2003
4. Current and Future Research Issues at USU

### 1. OVERVIEW OF VPR AND RELATED UNITS

The VPR is responsible for the units shown in the following diagram. The USU Research Foundation is a wholly owned subsidiary of the University. It is a major organization with large-scale research programs, most notably the Space Dynamics Laboratory (SDL). A cooperative working relationship with the Research Foundation is essential for accomplishing the research mission of the University. The USU Research Council advises the VPR, providing a forum for considering major research issues. The office of Technology Commercialization and the Innovation Campus are strategic or mission oriented units. The others are research service units.



## **1. A. SERVICE UNITS**

### **1) Sponsored Programs Office (SPO)**

The SPO at Utah State University supports researchers as they propose, submit and administer externally sponsored research projects on and off campus. The role of this office puts SPO in contact with virtually every college, department, research center, and administrative unit at USU. The goals of efficiency, accountability and responsiveness are central to the administration of sponsored research. SPO personnel assist researchers with access to various agencies, necessary forms and detailed information to initiate proposals and coordinate the award of a contract or grant with the Principal Investigator (PI) and USU Controller's Office. SPO provides both paper forms in their Old Main office and electronic forms on the USU SPO Web pages. The interdependent nature of contracting demands accountability between PI, College Dean, Department Head, Research Center Director, Controller's Office and VPR. SPO personnel review the proposal and award content to safeguard researchers and university units in their contractual obligations. The office supports walk-in access and the Web site provides forms, agreement templates, sample wording, links to funding sources and sponsor forms, and contact information. Promptness is essential. The office interacts directly with sponsors to facilitate and negotiate on behalf of researchers and USU.

SPO representatives present training to individual researchers and departments. SPO also fosters research at the university by assisting researchers with the successful completion of forms, interpretation of contract and proposal terms and conditions, tracking pending proposals, notification of receipt of award, obtaining financial accounts and attending to the contractual details of agreements with sponsors. They also attend contractual meetings and negotiations with PIs. Coordination with accounting personnel in the Controller's office is essential. SPO research administration flows through the Vice President for Research with whom they plan, report, and respond to research administration needs and requirements.

This past year staffing in SPO increased from two contract administrators to three, from two contract specialists to four, and from part time to a full time director. Increased staffing permitted SPO to initiate a team approach to contract administration in coordination with the Controllers Office. This team effort will aid P.I.'s in the administration and accounting of awards. Each team includes a contract administrator, contract specialist and a sponsored programs accountant. This cooperative effort enhances the coordination of pre and post award function at USU.

SPO upgraded its web site to enhance proposal development. The office is developing written sponsored programs policies and procedures to post on its website that will clarify USU processes and assist faculty and staff in the submission of proposals.

SPO provides monthly reports to the VPR regarding the status of research proposals and awards at Utah State University. Appendix A provides a summary of Sponsored Program Awards FY1999 through FY2003. Appendix B compares awards by month and type of award for FY2002 and FY2003. Appendix C provides a summary of Sponsored Program Awards by Awarding Agency FY1999 through FY2003 and Appendix D provides a summary of Sponsored

Program Awards by Research Center FY1999 through FY2003. State appropriations and students scholarships have been removed from all reports of awards.

## **2) Environmental Health and Safety Office (EH&S)**

The EH&S Office is a service organization that provides expertise and guidance for compliance with federal, state, and local safety and health regulations as well as current professional practices and guidelines. Its goal is to prevent injuries, illnesses, and environmental damage through the recognition, evaluation, and control of potential hazards arising from university activities. This is accomplished through services that ensure a safe and healthy environment for all students, faculty, and staff at USU and the surrounding community. Services include assisting the university in compliance with regulations and training university personnel and students in appropriate safety measures. General areas of focus include biological, radiological, occupational, and chemical health and safety.

The office interacts with many governmental regulators in the course of normal business, including: Environmental Protection Agency (EPA), State of Utah-Department of Environmental Quality (DEQ), Division of Radiation Control (DRC), Occupational Safety and Health Administration (OSHA), Centers for Disease Control (CDC), and the National Institutes of Health (NIH). Many of these entities perform routine and unannounced inspections, require written programs, documented training, permits, and numerous reports of differing types that the EH&S Office completes for the university.

Responsibilities of the EHS program cross many traditional aspects of the campus community. Major accomplishments for FY2003 included:

- Transported, managed and disposed of approximately 78,051 lbs. of hazardous waste and approximately 4,800 lbs. of radiation waste. Recycled 28,118 lbs. of hazardous materials.
- Aided in the safe removal of asbestos from the old steam plant tunnels and boiler.
- Provided safety training to approximately 830 faculty, staff and students in 26 courses.
- Implemented the radioactive liquid waste volume reduction plan, resulting in cost savings by reducing the amount of waste (620 lbs) shipped off-site for disposal.
- Began implementation of GIS Emergency Information Program.

Steve Bilbao became Director of EH&S on October 13, 2003.

## **3) Institutional Review Board (IRB)**

The IRB is charged with protecting the rights and welfare of human research participants. All research involving human participants, including unfunded research, must be reviewed in accordance with the Code of Federal Regulations. USU has a Federal Wide Assurance with the National Institutes of Health that commits USU to comply with federal regulations governing human participants in research, and is required for Department of Health and Human Services funded research. This Assurance is renewed every five years.

The IRB consists of volunteer members with diverse experience, to provide adequate and comprehensive review of research activities. Regulations require that an IRB have at least one scientist, one nonscientist, and one member not affiliated with the institution; terms are three years and can be renewed.

USU board members are: Mark Brunson – Department of Environmental and Society, Gretchen Gimpel --Department of Psychology, Vice Chair and Community Representative; Layne Coppock – Department of Environment & Society; Roy Goodey – nonscientist; Stuart Howell – community representative; Gretchen Gimpel – Department of Psychology; Ron Munger – Department of Nutrition and Food Science; Thorana Nelson – Department of Family and Human Development; Tim Slocum – Department of Special Education & Rehabilitation; Julie Gast – Department of Health, Physical Education and Recreation; Sammie Justesen, Prisoner Advocate; and True Rubal – IRB Administrator.

The IRB meets monthly to review protocol applications requiring regulatory approval. Certain research protocols do not require full board review and can be classified as “Exempt” or “Expedite.” All reviews follow criteria provided in the federal regulations. All on-going research projects are reviewed yearly; however, if there is more than a minimal risk, the continuation research reviews are more frequent.

The IRB office documents compliance with federal regulations by maintaining a database of all research protocols submitted and of actions taken by the board. Written policies and procedures established by the board and congruent with federal guidelines have been instituted to address procedures such as yearly continuing review, reporting of adverse events, changes in research methods and objectives, and researchers’ conflict of interest. An IRB Handbook is on the VP for Research web page at [www.usu.edu/vpr/policies/irb](http://www.usu.edu/vpr/policies/irb)

The IRB Administrator is actively involved in implementing revised federal procedures and updating USU procedures; providing continuing education for faculty, students, and board; and helping to coordinate ethics-in-research training for researchers and IRB members.

Appendix E illustrates the number of IRB research applications by types of review categories from 1998-2002.

#### **4) Laboratory Animal Research Center (LARC)**

The primary mission of the LARC is to support university animal research, testing, and teaching by providing resources for animal procurement, housing, husbandry and care, health care and disposal. Space is also provided for researchers to conduct short and long-term research. The LARC staff is also a resource for expert information on the use of live animals in research and teaching. The LARC is an Association for Assessment and Accreditation of Laboratory Animal Care (AALAC) International accredited, Public Health Service (PHS) assured, and United States Department of Agriculture registered animal research center.

The permanent salaried LARC staff consists of the following: A part-time director (S. Allen, USU faculty member) who is a Utah licensed and USDA accredited veterinarian and an affiliate of the American Association of Laboratory Animal Practitioners; a full-time supervisor (K. Udy) who is a certified Registered Laboratory Animal Technologist; a full-time secretary (C. Coombs), one full-time animal caretaker and a part-time animal caretaker (L. Potter). There are also part-time students employed who work in the washroom and provide basic animal care. In exceptional cases, researchers provide part or all of their own animal care. LARC approach to staffing has been that as workload changes part-time student work hours go up or down. The full-time supervisor (Udy) and secretary (Coombs) have shared assignment with the Institutional Animal Care and Use Committee (IACUC).

Major accomplishments for FY2003 included:

- Maintained AAALAC International Accreditation, PHS Assurance and USDA Registration.
- Security systems were upgraded by the installation of a non-working hours door intrusion alarm system which is connected to central campus security.
- Changed accounting system to more accurately account for direct and indirect costs of LARC and IACUC.
- Completed a 2,240 square foot addition to LARC; replaced LARC air supply system to make it compatible with new central campus heating and air conditioning system; remodeled space in a 3-room suite to accommodate NIH funded projects of two new faculty.

## **1.B. STRATEGIC UNITS**

### **1) Utah State University Innovation Campus**

The Utah State University Innovation Campus (IC) is committed to developing an effective working environment for state of the art technology enterprises, research institutes, and laboratories. Its “campus style” business environment facilitates collaboration and alliances among tenants, faculty, students, business, industry, and government to foster technology clusters that build long-term economic benefits for the University and the State of Utah.

The IC recently reached a threshold where future growth and development was limited by lack of room to expand. With a vision of dynamic future growth, it became apparent that additional land was needed. In partnership with the College of Agriculture, and the Ag Experiment Station, the IC purchased 512 acres in Cache Junction, which was exchanged for some of the agriculturally used property between 600 East to 1200 East and 1400 North to 1800 North. Certain parcels were not included in the Ag/IC land exchange because some historical projects needed to be maintained. As a result of this partnership, an additional 120 acres were acquired for the future growth and development of the IC.

To successfully develop the IC and fulfill the vision for future development over the next 30 to 40 years, Sasaki and Associates, an urban planning and design firm based in Boston, has been working with the IC Administration to develop a master plan. The master plan will be used to guide future development of the campus. One of the objectives in developing the master plan is to give attention to ways of conserving energy, resources, and implementing state-of-the-art measures for landscaping and architectural design.

The IC worked in partnership with the USU Research Foundation and the USU Administration in issuing a bond for the construction of three buildings; SDL Calibration and Optical Research Lab, the USU Research Foundation Administration building and the USU Research Foundation Molecular Facility, totaling approximately 100,000 square feet of office and lab space.

The IC has been actively involved in attracting new companies. For example, the IC partnered with the State of Utah to attract Information Connections/Information Alliance, a marketing research firm that employs approximately 250 employees. This model has provided a network for the State of Utah Smart Sites program.

Programs to improve tenant relationships have been implemented (i.e. improved data and telephone services, discounted rates for participation in a corporate wellness program and acknowledgement as a campus business partner with I.D. cards for various discounts and participation in programs at Utah State University). A daily shuttle service between the USU main campus and the USU IC has been added. The establishment of an energy efficiency partnership program with Utah Power and Light was implemented. The IC has been working on a marketing strategy and promotion materials, which has resulted in the development of a new logo, website, and a promotional DVD.

IC Acting Director, M. K. Jeppesen and Manager Teresa McKnight, were invited to speak on its success and future at the Association of University Research Parks national conference held in New Orleans. The IC has received publicity within the Association of University Research Parks, which has spotlighted the accomplishments and future vision for Innovation within the Rocky Mountain West.

## **2) Office of Technology Management and Commercialization (OTMC)**

The OTMC complements the research activities of USU and promotes University outreach by developing and commercializing technologies for public use and benefit, potentially providing additional income to the University and its partners.

FY 2003 was the first full year for the Office of Technology Management and Commercialization (OTMC) within the USU Research Foundation and under new leadership. One indication of the early success of this new team is that invention disclosures were up 100% in the physical sciences, and increased more than 50% overall.

In addition to their traditional role of patenting and licensing USU/USU Research Foundation technologies, OTMC has a strong emphasis on increasing the commercial value of these

technologies. A number of strategic human and financial resource initiatives have been implemented in 2003 which will increase the value of technologies.

The staff additions include Dr. Carole Golden, who has a strong background in biotechnology research and commercial start-ups, who now leads Life Science technology commercialization. Lola Jean Bolton, office manager, has an extensive career with engineering based companies and firms. An Advisory Board for OTMC was formed with prominent business people in each main technology area to help define the best approach to marketing technologies. By partnering with USU College of Business, MBA students are providing market research support for key technologies. In addition to providing valuable information for business development activities, these assignments provide a valuable educational experience for students with real business cases.

A number of financial resource initiatives also have been implemented. A Technology Development Bridge Fund was approved and implemented. These funds provide support to develop technologies (as opposed to research) with excellent commercial potential. Among the technologies funded were a high protein snack food based on cheese whey, a revolutionary cooling device that requires no external power and has no moving parts, and a genetic marker system for neurological disorders. A companion Business Development Bridge Fund was also approved and implemented. Among the businesses to receive bridge funding for commercial launch support are 3GB (web-based teaching systems) and Hi\*Track (a software tracking system for testing infant hearing). A renewed emphasis on soliciting State of Utah Center of Excellence funding for technology commercialization resulted in a five-fold increase in new proposals. This resulted in one new funded center and five new planning grants. Excellent progress was also made in establishing a Venture Capital Fund to provide seed and angel funding for early stage businesses coming from USU/USU Research Foundation technologies. A strong management team, including a senior general partner has been assembled and fund raising is underway.

Transferring technologies from USU/USU Research Foundation into the market place at the right stage of development is key to maximizing the value and opportunities for a technology. Typical university technologies are at a very early stage and have a high level of risk associated with their commercialization; this is because a number of questions are unanswered about the ability to produce a product (within acceptable costs) that will be of interest to customers. Having a capability to develop prototypes incorporating the technology helps answer the manufacturing cost questions and provides samples for customer evaluations.

A new unit operation within OTMC is being added that will have the capability to develop electro-mechanical prototypes incorporating technologies developed within USU/USU Research Foundation. By partnering with inventors that have developed the basic technology, it will be possible to significantly accelerate the commercialization process and increase the value of the technology for all key stakeholders. The initial work of this unit will be in developing prototypes for robotic technology developed in the College of Engineering.

The charts in Appendix F reflect major technology management indicators for the fiscal year ending June 2003. As noted, the number of YTD disclosures in the current year (49) is higher compared to the year before (38). USU's patenting activity increased by 4%; and there were 76



technologies licensed through June 2002 versus 76 licensed through June 2003. Licensing and royalty revenues were slightly lower at the end of June this year (\$247,291) compared to the year before (\$280,381) but royalties are expected to grow substantially in the coming year.

## **2. RESEARCH COUNCIL MEMBERSHIP AND FUNCTIONS**

The Research Council provides advice and recommendations to the Vice President for Research. Additionally, members of the Council provide direct and important channels of communication between researchers and those who make decisions affecting research at USU. Members of the Research Council are college deans or their representatives, and selected center/lab directors as specified by the code of policies and procedures. Appendix G is a current membership list of the University Research Council. This group meets about once a month to discuss and make recommendations on research issues.

Major issues addressed by the Research Council in FY2003 included:

- |                |   |
|----------------|---|
| August 2002    | <i>Research Matters</i> , a new marketing brochure for USU research, was discussed and reviewed. Suggestions were made to highlight alumni who have created successful businesses in Utah. VPR agreed to increase the eleven V. P. Research graduate fellowships from \$12,000 to \$15,000.   |
| September 2002 | Discussed results of NIH Proactive Site Visit conducted in August 2002. Recommendations included implementation of expanded faculty education and training for research compliance, development of research-related policies (conflict of interest and intellectual property), and increasing staffing levels.  |
| October 2002   | Electron Microscope (EM) Laboratory subcommittee completed its review and reported that the Lab could not recover all of its costs from service fees at its current level of usage. Bart Weimer was named Director of the Biotechnology and Genomics Research Center. Dennis Paffrath was named Director of Sponsored Programs Office (SPO).  |
| December 2002  | Research Council approved SPO policy that provides for a 48-hour turn around time for proposal review in SPO. The Water Task Force presented its report. Conflict of Interest Policy 307 was revised and approved. Discussion continued regarding VPR marketing video. Effective October, 2003, HHS, NSF, and NIH will require electronic proposal submission. Dennis Paffrath will lead USU implementation of electronic submission. |
| February 2003  | Research Council approved federal policy requiring faculty/staff P.I.'s to submit notification if they are taking extended leave was submitted to the Provost's Office. A notification form will be   |

included with sabbatical request forms. Council reviewed USU policy regarding establishment of Centers and Institutes. Council approved the creation of Center for On-line Education in College of Education and Western Center for Monitoring and Assessment of Freshwater Ecosystems in College of Natural Resources. F&A Subcommittee reported its recommendations.

March 2003

V.P. Research appointed a Committee to review and make recommendations regarding USU's policy to create Research Centers. The Research Council was commended for submitting seven nominations from USU for the Governor's Medal for Science. College of Business outlined an MBA program to improve tech transfer and commercialization on campus by utilizing MBA students to review pre-proposals and proposals for marketing and commercialization ideas. This service will be offered to all researchers.

April 2003

Eco-Terrorism Subcommittee met and requested deans and directors provide a priority listing of facilities and/or programs that might be targets for terrorism acts. The V. P. Research discussed New Faculty Research Grants and recommended new guidelines to be developed that clarify priorities for funding distribution. Drs. Clair Batty and David Bowles from USU were awarded the Governor's Medal for Science.

June 2003

Subcommittee report for Eco and Animal Rights Terrorism was presented. It ranked facilities and/or programs that terrorists might target and security precautions were discussed. V.P. Research asked Deans and Research Council to refrain from asking for waiver of indirect costs. If sponsoring agency will not allow F&A, then P.I. should consider asking for an administrative fee. A University initiative to enhance USU revenue was discussed. A representative from Controller's and Sponsored Programs Office will meet with individual deans on a quarterly basis to review the college's over budget report and develop strategies to reduce contract deficits. Sigma Xi is under review to see if it should be started again at USU. Council discussed creating a database of scholarly publications to report faculty productivity in research and scholarship.

During the past year, the VPR and Research Council also identified specific operational priorities that have served to focus and guide efforts in the VPR office. These strategic priorities highlight areas of concerted attention.

1. Strengthen and develop major research clusters and initiatives.
2. Develop Office of Technology Commercialization into a strong service unit for inventors and a revenue generating enterprise for USU.
3. Shift Research Park toward Innovation Campus emphasizing partnerships.
4. Increase indirect cost recovery.
5. Create credible reports of research related activities

### **3. USE OF FACILITIES AND ADMINISTRATION FUNDS AT USU, FY2002-2003**

Facilities and Administrative (F&A) costs are the shared indirect or overhead costs of research. The federal government audits actual F&A costs and establishes a rate that the university seeks to recover from sponsors. Recovered F&A funds are used to pay actual indirect costs of research, and to stimulate and expand research opportunities.

Appendix H is a report compiled by the Controllers Office that summarizes the amount of F&A generated in FY2002-03 by department; 30% returned to the cost center; and allocations of 70% held centrally in the VPR.

The graph in Appendix I compares F&A revenues generated by, and allocations from all VPR sources to USU colleges.

### **4. CURRENT AND FUTURE RESEARCH ISSUES AT USU**

Listed below are selected 2002-2003 initiatives undertaken in the Vice President for Research Office.

1) Improve Reporting of USU Research Activity at USU. The VPR, in cooperation with the Controllers Office, have developed reports that reflect total research expenditures at USU utilizing NSF definitions. This will facilitate comparison of USU and peer institutions. Appendix J is a graph that illustrates research expenditures from federal and nonfederal sponsors for the past five years. The pie chart in Appendix K summarizes total research expenditures for scientific and engineering research expenditures and nonscientific and engineering research expenditures for FY2003. FY2002 was the first year that nonscientific and engineering research expenditures data were reported separately.

2) Strengthen the Bio molecular Systems Research Cluster. Additional one time (\$120,000) and ongoing funding (\$300,000) was obtained through the compact planning process of campus wide Selective Investment. These funds are being administered through the Center for Integrated Bio Systems in the Biotechnology facility.

3) Increase Research Activities for Undergraduate Students. The VPR provides support for undergraduate research grants through Undergraduate Research and Creative Opportunities (URCO) with a similar program under development for minority students. The VPR supports Posters on the Hill for undergraduate students to present research at the State Capital (26

students) and Washington, D.C. (11 students). The VPR also provided support for undergraduate students (20) to participate at the National Conference for Undergraduate Research.

4) Build the Sponsored Programs Office (SPO) to Upgrade Services. Positive changes in the SPO were described in Section I of this report, including the addition of new contract administrators funded through a compact planning initiative.

5) Distribution and Use of Facilities and Administration (F&A) Funds. A subcommittee of the Research Council, chaired by Scott Hinton, completed its study of F&A recovery and distribution and made the following recommendations to the Research Council:

- Limit F&A waivers
- Develop metric to calculate maximum F&A that USU can receive
- Reaffirm percent of F&A returned to colleges/centers (30%)
- Reaffirm current 50/50 cost share for new faculty start-ups
- Limit university cost share to that required by funding agency
- Return F&A program support proportional to amount of F&A generated (except 20% allocated for creative activities)
- Shift cost of research facilities to direct costs where possible
- Provide monthly summary report of sponsored grants/contracts awards by department
- Develop a data set that maps F&A earnings to each principal investigator's home department and college to more accurately allocate program support
- Enhance USU policies and procedures for the establishment of centers and institutes

6) Improve Federal Relations Process. The VPR has strengthened USU's presence in Washington, D.C. by meeting frequently with elected officials and agency representatives in the Washington, D.C. area. Additionally, the VPR has developed a systematic process of coordinating congressional requests. Requests are presented by the deans and prioritized by the President and Provost in an effort to increase our chances of obtaining congressionally directed funding and increasing their amounts.

7) Improve Marketing of USU Research. A marketing specialist has been added to better tell USU's research story. A VPR Dashboard was also developed to compare research performance indicators. (Appendix L) The VPR office is working to create an impact statement of USU research, showing that research is a good investment for its various constituents, including the university community, Cache Valley, and Utah. An annual report for the general public has been prepared documents the benefits of research, both economic and academic.

8) Selected Other Research Issues of Concern. Human Capital is a critical problem. Other states are bonded and attract and retain faculty using better incentives. Develop Financial Funding plans to build and fund facilities. Develop better infrastructure for Information Technology High Speed Computing capacity including grids and alternative paths into the valley. More money is needed to fund graduate students. When grants and soft monies end abruptly, students need a safety net to finish research. Security. Separate more research from teaching areas. Systematic review of all buildings on campus, what is housed, and what security needs would be.

APPENDIX A

SPONSORED PROGRAM CONTRACT/GRANT AWARDS  
BY COLLEGE<sup>1</sup>

	<b>1998-99</b>	<b>1999-00</b>	<b>2000-01</b>	<b>2001-02</b>	<b>2002-03</b>
Agriculture <sup>2</sup>	10,774,979	13,517,310	21,796,305	29,344,387	32,855,803
Business <sup>2</sup>	1,327,435	2,438,801	1,273,164	1,894,131	1,340,875
Education	15,382,494	16,877,463	17,776,693	20,162,620	23,069,480
Engineering	41,133,692	55,000,955	59,626,203	46,775,208	58,024,532
Family Life <sup>3</sup>	255,645	192,579	6,000	0	0
HASS	580,370	846,020	479,944	518,329	303,769
Natural Res.	7,116,033	7,048,039	9,681,254	10,980,726	8,297,175
Science	7,428,701	7,808,961	9,442,672	10,977,131	9,083,475
Other	2,342,326	3,049,859	6,038,110	3,564,960	6,135,902
Jointly Admin. Programs <sup>2</sup>	(1,180,902)	(1,877,198)	(975,490)	(1,648,635)	(880,088)
<b>TOTAL<sup>4</sup></b>	<b>85,160,773</b>	<b>\$104,902,789</b>	<b>\$125,144,855</b>	<b>\$122,568,857</b>	<b>\$138,230,923</b>

<sup>1</sup> College awards include centers most closely aligned with that college. (See Appendix D for Center totals.)

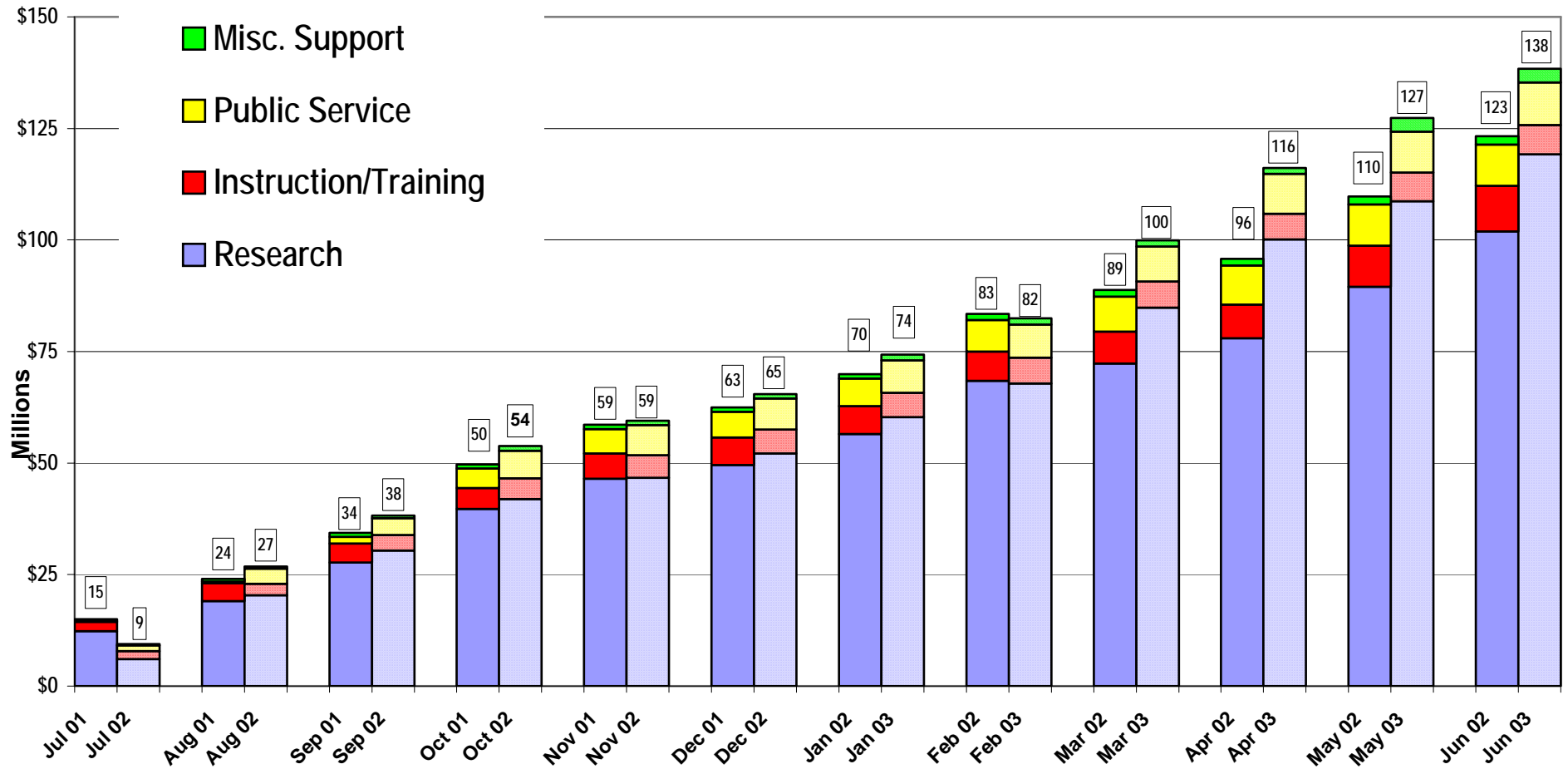
<sup>2</sup> Award totals for jointly administered programs are reflected in the totals of both colleges involved with these programs. The amount in the jointly administered programs category is an accounting function designed to eliminate double counting of awards.

<sup>3</sup> College of Family Life was disbanded in FY2002. College award figures reflect faculty award information shifted to different colleges.

<sup>4</sup> Figures adjusted to exclude scholarships, fellowships, and state appropriations for research.

APPENDIX B

## Utah State University YTD Sponsored Program Awards FY 2002, FY 2003



APPENDIX C

**BY FEDERAL SPONSORING AGENCY (IN DOLLARS)**

	<b>FY98-99</b>	<b>FY99-00</b>	<b>FY00-01</b>	<b>FY01-02</b>	<b>FY02-03</b>
Department of Agriculture	5,928,252	6,620,467	8,681,220	13,230,864	8,921,597
Department of Defense	24,781,483	25,543,310	35,479,396	24,668,809	40,633,208
Department of Education	6,710,807	6,784,208	7,217,261	7,203,705	5,712,791
Department of Health and Human Services	5,231,582	7,959,660	8,410,599	12,160,887	11,086,906
Department of the Interior	2,180,211	2,051,827	3,046,466	2,313,308	3,248,809
Department of State	-	-	1,513,350	118,000	-
Environmental Protection Agency	512,079	150,000	1,620,279	182,465	1,060,190
National Aeronautics & Space Administration	11,124,670	5,622,590	8,621,203	17,182,036	22,249,464
National Science Foundation	4,280,159	3,505,830	3,472,475	5,505,032	4,513,242
State Agencies & Others <sup>1</sup>	<u>24,411,530</u>	<u>46,664,897</u>	<u>47,082,606</u>	<u>40,003,751</u>	<u>40,949,497</u>
<b>TOTAL<sup>2</sup></b>	<u><u>\$85,160,773</u></u>	<u><u>\$104,902,789</u></u>	<u><u>\$125,144,855</u></u>	<u><u>\$122,568,857<sup>2</sup></u></u>	<u><u>\$138,230,923</u></u>

<sup>1</sup>This number is a composite of international banks, state agencies, other federal agencies, local agencies, private industry, and others.

<sup>2</sup>Figures adjusted to exclude scholarships, fellowships, and state appropriations for research.

APPENDIX D

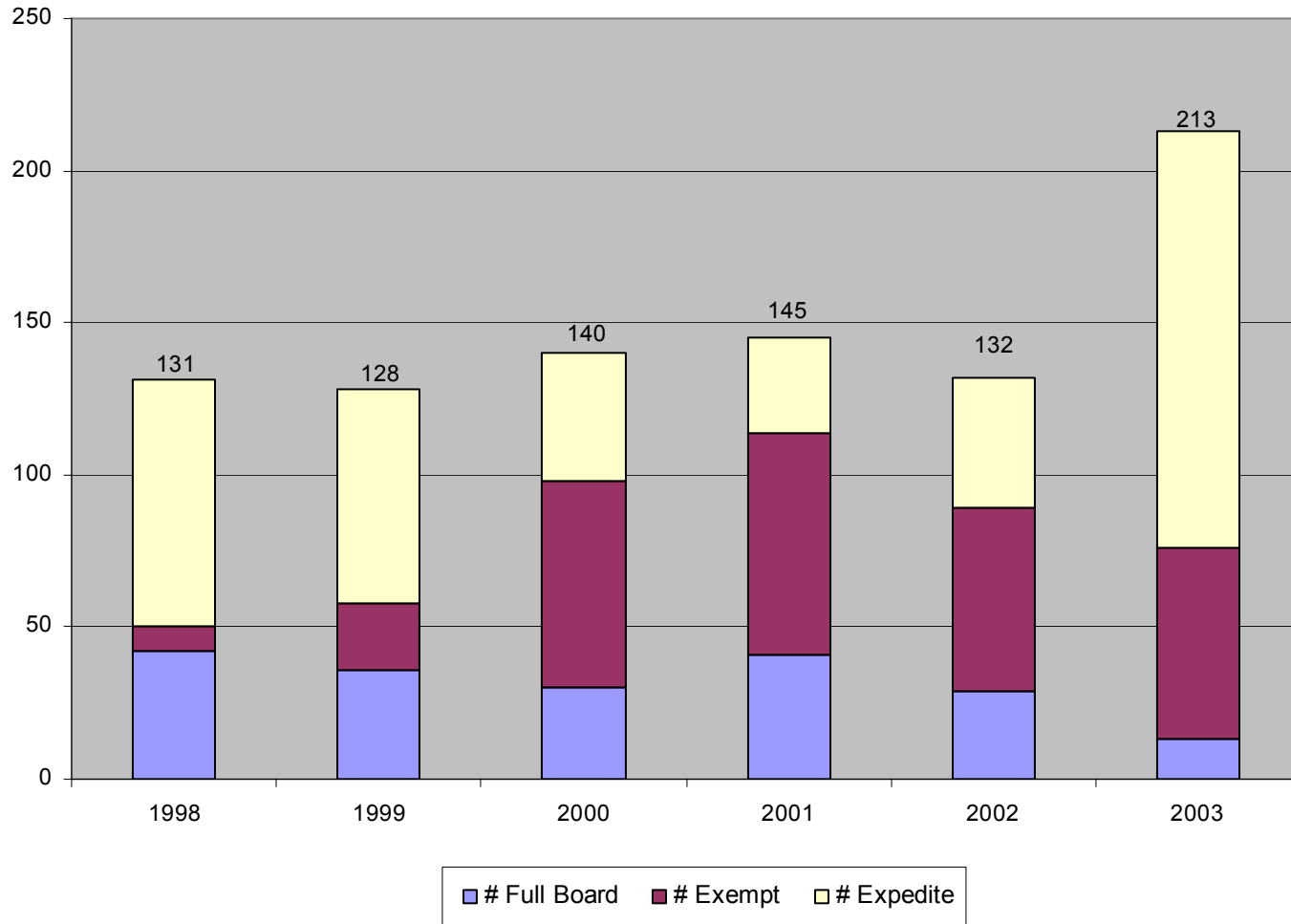
**SPONSORED PROGRAMS CONTRACT/GRANT AWARDS  
BY RESEARCH CENTER**

<b>RESEARCH CENTER</b>	<b>FY 98-99</b>	<b>FY 99-00</b>	<b>FY 00-01</b>	<b>FY 01-02</b>	<b>FY 02-03</b>
Ag. Experiment Station	\$8,268,640	\$11,384,886	\$12,890,156	\$14,075,399	\$8,706,601
Biotech. Center	\$162,427	\$222,821	\$86,719	\$68,247	\$12,879
CASS	\$1,517,210	\$1,399,997	\$1,475,352	\$1,877,538	\$1,810,200
CPD	\$8,239,704	\$8,343,046	\$10,027,928	\$9,227,716	\$8,391,484
Center for Space Eng. (Beginning FY2002, USURF reassigned reporting centers)	\$234,964	\$235,466	\$115,644	\$330,631	\$127,500
Cooperative Extension	\$3,367,198	\$4,817,625	\$4,683,379	\$4,776,956	\$5,364,247
Ecology	\$3,315,241	\$1,872,362	\$2,997,761	\$2,850,886	\$2,994,710
Eng. Experiment Station	\$2,399,051	\$4,569,571	\$12,797,261	\$1,403,020	\$430,762
International Programs	\$66,000	\$364,475	\$0	\$0	\$0
School of the Future	\$0	\$0	\$0	\$21,811	\$57,600
Provost	\$0	\$0	\$0	\$0	\$447,000
Univ. Research & Training	\$18,261,504	\$24,765,302	\$26,657,551	\$29,756,469	\$34,081,231
USU Research Foundation	\$35,683,965	\$41,062,140	\$49,526,018	\$54,139,885	\$70,322,046
Remote Sensing	\$367,823	\$978,141	\$1,671,608	\$482,214	\$1,276,434
Utah Water Research Lab.	\$3,277,046	\$4,886,957	\$2,215,478	\$3,558,085	\$4,208,229
<b>Total USU</b>	<b>\$85,160,773</b>	<b>\$104,902,789</b>	<b>\$125,144,855</b>	<b>\$122,568,857</b>	<b>\$138,230,923</b>

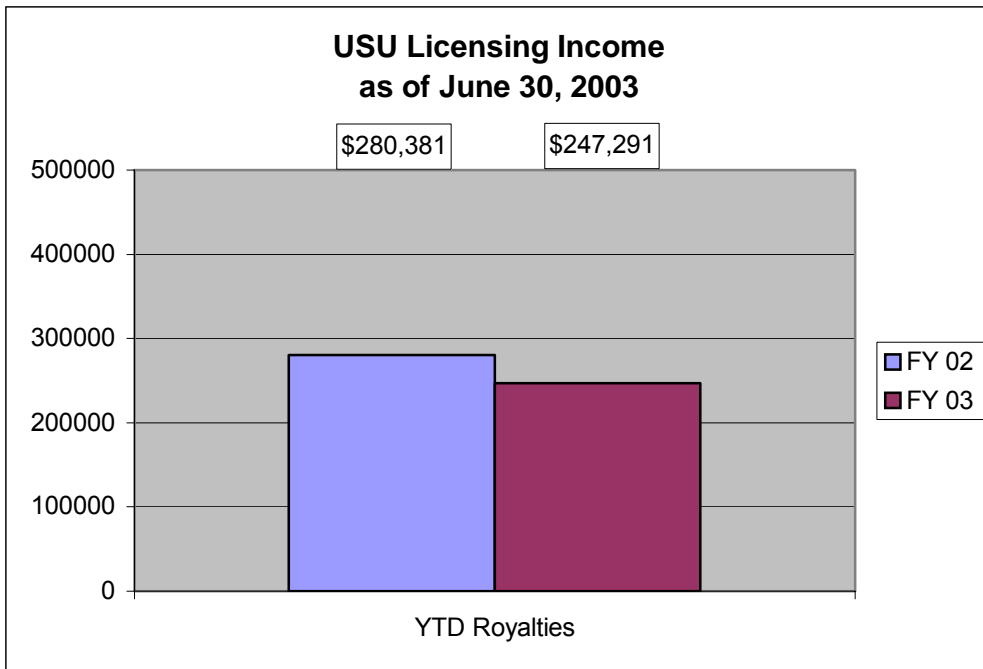
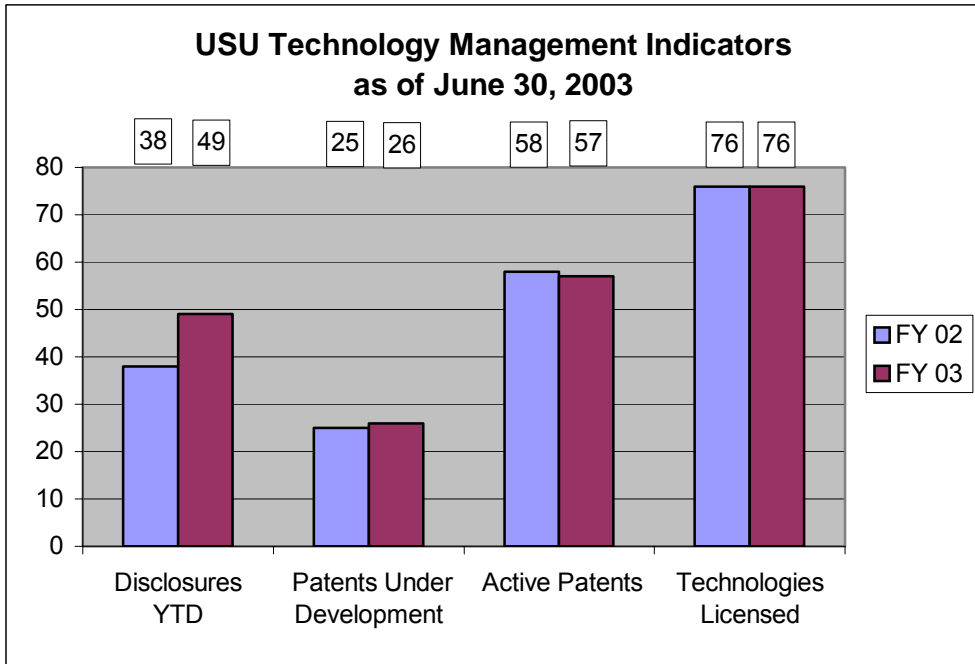


APPENDIX E

**Institutional Review Board (IRB)  
Research Projects Approved by Category and Total**



APPENDIX F



## APPENDIX G

### UNIVERSITY RESEARCH COUNCIL Membership (2003-2004)

		<u>EXT</u>	<u>UMC</u>
Brent C. Miller	Vice President for Research, Chairman	1180	1450
Stan Albrecht	Executive Vice President and Provost	1167	1435
Caryn Beck-Dudley	College of Business	2376	3555
Frank E. Busby	College of Natural Resources	2445	5200
Martyn Caldwell	Ecology Center	2555	5205
Noelle Cockett	College of Agriculture	2215	4800
Don Fiesinger	College of Science	2478	4400
Steve Hansen	Space Dynamics Laboratory	4501	9700
Scott Hinton	College of Engineering	2775	4100
M. K. Jeppesen	Associate Vice President for Research	1199	1450
Gary Kiger	College of Humanities, Arts & Social Sci.	1200	0700
Joyce Kinhead	Vice Provost for Undergraduate Studies And Research	1706	1435
Thomas Kent	School of Graduate Studies	1191	0900
Mac McKee	Utah Water Research Laboratory	3188	8200
David G. Norton	USU Research Foundation	4568	9710
H. Paul Rasmussen	Agricultural Experiment Station	2207	4810
Sarah Rule	Center for Persons with D	6800	1987
Carol Strong	College of Education	1469	2800
Bart Weimer	Biotechnology Center	3356	8700
Dennis Welker	Faculty Senate	3552	5305
Barbara A. White	Information and Learning Resources	2645	3000
 <u>Students</u>			
Steve Skinner	Science Senator		0105
Stephanie Kukic	Graduate Student Senator		0105
Karla Petty	Academic V.P.		0105

# APPENDIX H

20-Oct-03

**Utah State University**  
**Analysis of Facilities and Administrative Costs Generated and Allocated**  
**July 1, 2002 through June 30, 2003**

<b>College or Other Unit</b>	<b>Generated</b>	<b>Budget Allocations From 30% Return</b>	<b>Budget Allocations From 70% Centrally Held</b>	<b>Total Budget Allocations</b>	<b>Budget as a % of Generated</b>
College of Agriculture			\$54,560.00	\$54,560.00	N/A
Dean's Office - Agriculture	\$8,577.90	\$2,573.52		2,573.52	30.00%
Agriculture - Economics	54,937.27	16,481.17	12,800.00	29,281.17	53.30%
Agricultural Experiment Station	77,029.22	23,108.77		23,108.77	30.00%
Agricultural Systems Technology and Education	2,156.78	647.03	51,750.00	52,397.03	2429.41%
Animal, Dairy and Veterinary Sciences	578,183.20	173,454.97	64,133.00	237,587.97	41.09%
Biotechnology			25,000.00	25,000.00	N/A
Center for Epidemiology Studies	117,252.66	35,175.79	236,638.00	271,813.79	231.82%
Nutrition and Food Science	386,911.50	116,073.45	54,000.00	170,073.45	43.96%
Plants, Soils and Biometeorology	218,816.92	65,645.06	112,434.00	178,079.06	81.38%
Total College of Agriculture	<u>1,443,865.45</u>	<u>433,159.76</u>	<u>611,315.00</u>	<u>1,044,474.76</u>	<u>72.34%</u>
College of Business			25,000.00	25,000.00	N/A
Business Administration			4,700.00	4,700.00	N/A
Business Information Systems	-0.37	-0.11	36,701.82	36,701.71	N/A
Economics	13,422.20	4,026.66	18,947.18	22,973.84	171.16%
Management and Human Resources			1,360.98	1,360.98	N/A
Total College of Business	<u>13,421.83</u>	<u>4,026.55</u>	<u>86,709.98</u>	<u>90,736.53</u>	<u>676.04%</u>
College of Education					
Dean's Office - Education	4,295.56	1,288.60	66,910.00	68,198.60	1587.65%
Center for Persons with Disabilities	1,178,646.59	353,593.98	5,066.00	358,659.98	30.43%
Communicative Disorders	278,943.57	83,683.07	42,694.00	126,377.07	45.31%
Elementary Education			22,810.00	22,810.00	N/A
Family Consumer and Human Development	603,622.16	181,086.67	390,730.75	571,817.42	94.73%
Health, Physical Education and Recreation			8,000.00	8,000.00	N/A
Instructional Technology	97,582.13	29,274.64	14,000.00	43,274.64	44.35%
Psychology	236,996.76	71,099.02	135,622.41	206,721.43	87.23%
Secondary Education	2,141.18	642.35	48,350.00	48,992.35	2288.10%
Special Education and Rehabilitation	53,359.91	16,007.98	37,434.00	53,441.98	100.15%
Total College of Education	<u>2,455,587.86</u>	<u>736,676.31</u>	<u>771,617.16</u>	<u>1,508,293.47</u>	<u>61.42%</u>
College of Engineering					
Dean's Office - Engineering	8,192.20	2,457.66	50,440.00	52,897.66	645.71%
Biological and Irrigation Engineering	395,669.99	118,701.01	125,000.00	243,701.01	61.59%
Civil and Environmental Engineering	84,607.60	25,382.27	41,000.00	66,382.27	78.46%
Electrical and Computer Engineering	64,710.62	19,413.19	215,718.00	235,131.19	363.36%
Engineering Experiment Station	290,640.49	87,192.15		87,192.15	30.00%
Industrial Technology and Education			32,595.00	32,595.00	N/A
Mechanical and Aerospace Engineering	18,972.41	5,691.73	104,240.00	109,931.73	579.43%
Utah Water Research Laboratory	837,798.26	251,339.55	100,000.00	351,339.55	41.94%
Total College of Engineering	<u>1,700,591.57</u>	<u>510,177.56</u>	<u>668,993.00</u>	<u>1,179,170.56</u>	<u>69.34%</u>
College of Humanities, Arts and Social Sciences					
Dean's Office - Humanities, Arts and Social Sciences	71.66	21.50	45,000.00	45,021.50	62826.54%
Communication			14,418.00	14,418.00	N/A
English	-63.78	-19.13	16,670.00	16,650.87	-26106.73%
Landscape Architecture and Environmental Planning	4,131.64	1,239.49		1,239.49	30.00%
Languages and Philosophy	322.11	96.63	29,851.00	29,947.63	9297.33%
Music			6,173.00	6,173.00	N/A
Political Science			70,000.00	70,000.00	N/A
Sociology, Social Work and Anthropology	30,048.83	9,014.66	53,924.00	62,938.66	209.45%
Theatre Arts			11,783.00	11,783.00	N/A
Total College of Humanities, Arts and Social Sciences	<u>34,510.46</u>	<u>10,353.15</u>	<u>247,819.00</u>	<u>258,172.15</u>	<u>748.10%</u>

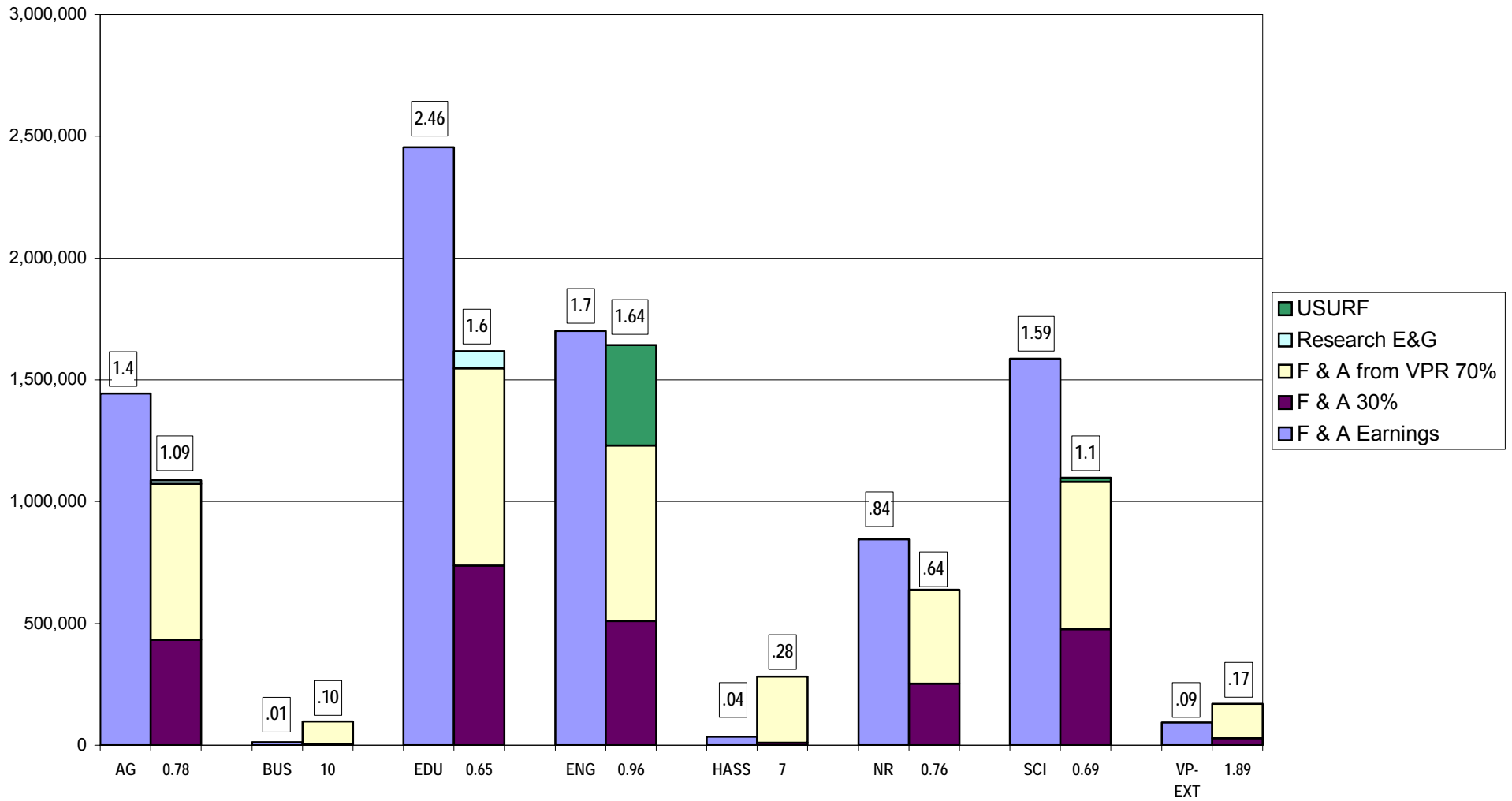
College of Natural Resources					
Deans Office - Natural Resources	81.72	24.52	30,520.00	30,544.52	37377.04%
Aquatic, Watershed and Earth Resources	362,369.62	108,710.88	93,631.00	202,341.88	55.84%
Ecology Center	2,973.87	892.16	-	892.16	30.00%
Environment and Society			25,173.00	25,173.00	N/A
Fisheries and Wildlife	-931.66	-279.50	201,489.00	201,209.50	-21596.88%
Forest, Range and Wildlife Sciences	368,926.55	110,678.00		110,678.00	30.00%
Forest Resources	-2,920.29	-876.08		-876.08	30.00%
Geography and Earth Resources	8,320.00	2,496.00		2,496.00	30.00%
Rangeland Resources	105,843.16	31,752.94	17,109.00	48,861.94	46.16%
<b>Total College of Natural Resources</b>	<b>844,662.97</b>	<b>253,398.92</b>	<b>367,922.00</b>	<b>621,320.92</b>	<b>73.56%</b>
College of Science					
Biology	335,747.10	100,724.11	43,900.00	43,900.00	N/A
Center for Atmospheric and Space Sciences	290,434.62	87,130.38	95,252.00	195,976.11	58.37%
Chemistry and Biochemistry	546,910.67	164,073.17	19,320.00	106,450.38	36.65%
Computer Science	57,987.16	17,396.14	205,556.35	369,629.52	67.58%
Geology	57,987.16	17,396.14	11,681.00	29,077.14	50.14%
Mathematics and Statistics	49,815.63	14,944.70	55,000.00	69,944.70	140.41%
Physics	148,600.85	44,580.27		44,580.27	30.00%
Physics	157,667.07	47,300.14	101,692.00	148,992.14	94.50%
<b>Total College of Science</b>	<b>1,587,163.10</b>	<b>476,148.91</b>	<b>532,401.35</b>	<b>1,008,550.26</b>	<b>63.54%</b>
Vice President - University Extension					
Cooperative Extension	463.49	139.04	62,400.00	62,539.04	13493.07%
Extension Agriculture and Natural Resources	4,724.14	1,417.24	45,179.00	46,596.24	986.34%
Extension Field Staff	79,811.55	23,943.46		23,943.46	30.00%
Uintah Basin Center	9,084.88	2,725.45	35,096.00	37,821.45	416.31%
<b>Total Vice President - University Extension</b>	<b>94,084.06</b>	<b>28,225.19</b>	<b>142,675.00</b>	<b>170,900.19</b>	<b>181.65%</b>
Learning Resources Program					
Library Services			200,000.00	200,000.00	N/A
<b>Total Learning Resources Program</b>			<b>200,000.00</b>	<b>200,000.00</b>	<b>N/A</b>
International Programs					
	28,171.85	8,451.55		8,451.55	30.00%
Vice President - Student Administration and Services					
Academic Support Services	32,782.47	9,834.75		9,834.75	30.00%
Student Activities	9,718.43	2,915.53		2,915.53	30.00%
Student Wellness Center	-3.03	-0.91		-0.91	30.03%
<b>Total Vice President - Student Administration and Services</b>	<b>42,497.87</b>	<b>12,749.37</b>		<b>12,749.37</b>	<b>30.00%</b>
Utah State University Foundation					
Space Dynamics Laboratory	11,172,016.00	11,172,016.00	51,801.00	11,223,817.00	100.46%
Technical Support Services	6,645.93	1,993.78		1,993.78	30.00%
<b>Total Utah State University Foundation</b>	<b>11,178,661.93</b>	<b>11,174,009.78</b>	<b>51,801.00</b>	<b>11,225,810.78</b>	<b>100.42%</b>
School of Graduate Studies					
	15,519.06	4,655.72	239,000.00	243,655.72	1570.04%
<b>Total School of Graduate Studies</b>	<b>15,519.06</b>	<b>4,655.72</b>	<b>239,000.00</b>	<b>243,655.72</b>	<b>1570.04%</b>
<b>Total Colleges and Non - Academic Units</b>	<b>19,438,738.01</b>	<b>13,652,032.77</b>	<b>3,920,253.49</b>	<b>17,572,286.26</b>	<b>90.40%</b>

**Support of Infrastructure**

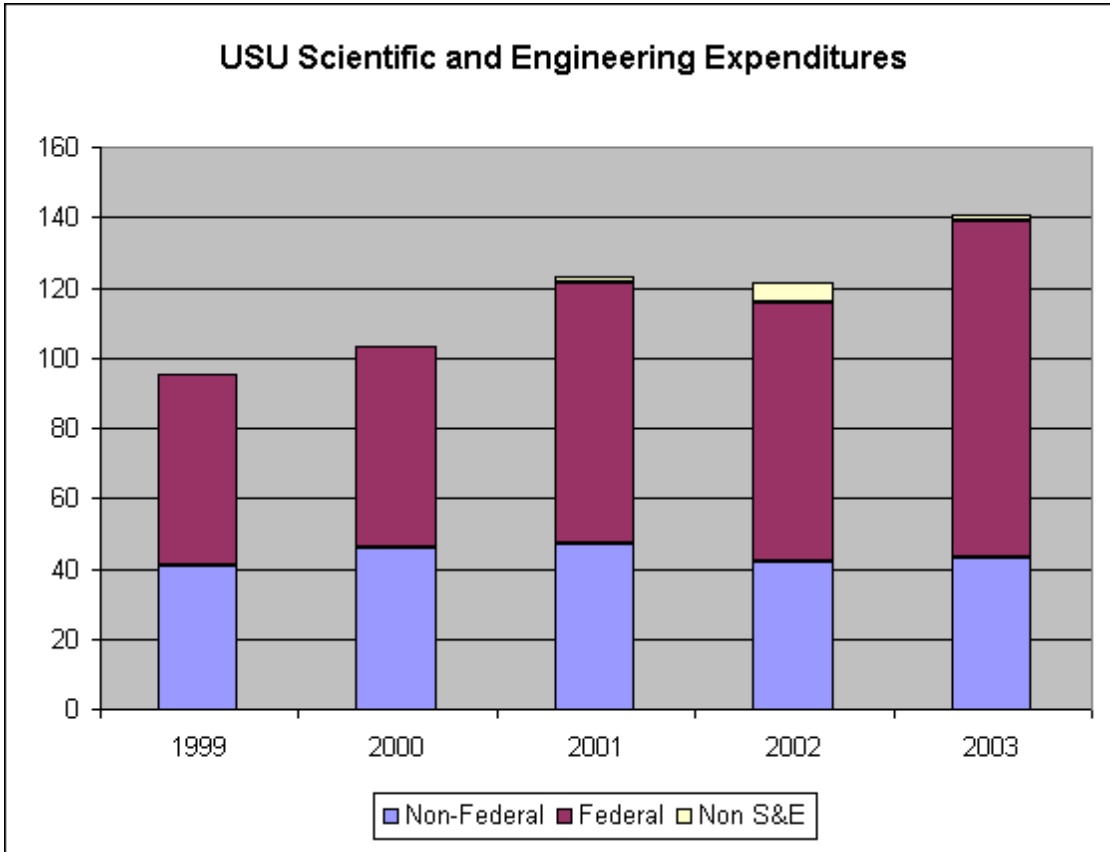
Vice President - Research					
Sponsored Programs Office	405.00	121.50		121.50	30.00%
Environmental Health and Safety	75,410.75	22,623.22		22,623.22	30.00%
Disallowance Account			100,000.00	100,000.00	N/A
Internet II			85,000.00	85,000.00	N/A
Laboratory Animal Research Center			6,096.00	6,096.00	N/A
Office of Technology Management and Commercialization			500,000.00	500,000.00	N/A
Washington Based Support			174,000.00	174,000.00	N/A
Total Vice President - Research	<u>75,815.75</u>	<u>22,744.72</u>	<u>865,096.00</u>	<u>887,840.72</u>	<u>1171.05%</u>
Vice President - Administrative Services					
Accounting and Financial Reporting			148,010.00	148,010.00	N/A
Controller's Office			56,120.00	56,120.00	N/A
Facilities and Administrative Cost Study			170,000.00	170,000.00	N/A
Federal Single Audit			10,000.00	10,000.00	N/A
Personnel Office	474.36	142.31		142.31	30.00%
Purchasing			22,246.00	22,246.00	N/A
Total Vice President - Administrative Affairs	<u>474.36</u>	<u>142.31</u>	<u>406,376.00</u>	<u>406,518.31</u>	<u>85698.27%</u>
<b>Total Support of Infrastructure (% is computed on total Facilities and Administrative generated from all units)</b>	<u><b>76,290.11</b></u>	<u><b>22,887.03</b></u>	<u><b>1,271,472.00</b></u>	<u><b>1,294,359.03</b></u>	<u><b>1696.63%</b></u>
<b>Provost's Office</b>			<u>327,727.48</u>	<u>327,727.48</u>	<u>N/A</u>
<b>Total Provost's Office</b>			<u><b>327,727.48</b></u>	<u><b>327,727.48</b></u>	<u><b>N/A</b></u>
Vice President - Research					
Biotechnology Bond			734,722.43	734,722.43	N/A
Total Vice President - Research			<u>734,722.43</u>	<u>734,722.43</u>	<u>N/A</u>
<b>Totals</b>	<u><b>\$19,515,028.12</b></u>	<u><b>\$13,674,919.80</b></u>	<u><b>\$6,254,175.40</b></u>	<u><b>\$19,929,095.20</b></u>	<u><b>102.12%</b></u>

APPENDIX I

**F & A Revenues Generated by, and Allocations to USU Colleges  
FY 2002-2003**



APPENDIX J



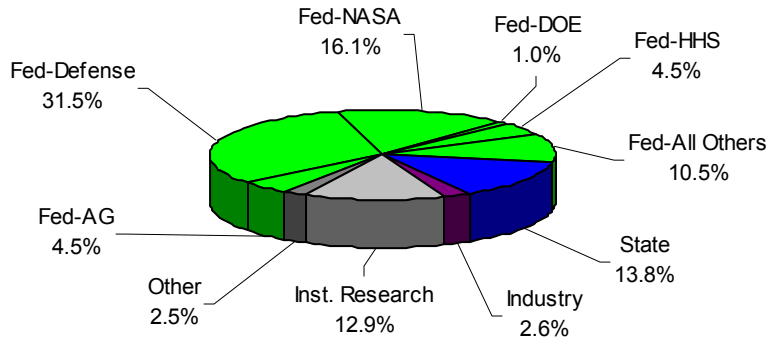
Millions of Dollars

	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
Non-Federal	40.9	45.8	47.1	42.1	43.3
Federal	54.4	57.4	74.3	73.9	95.5
Total S&E	95.3	103.2	121.4	116.0	138.8
Non S&E			2.0	5.6	1.8
Total Research Exp.	95.3	103.2	123.4	121.6	140.6

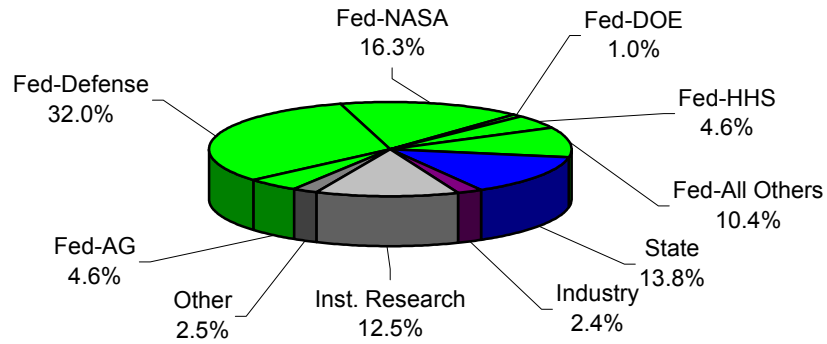


APPENDIX K

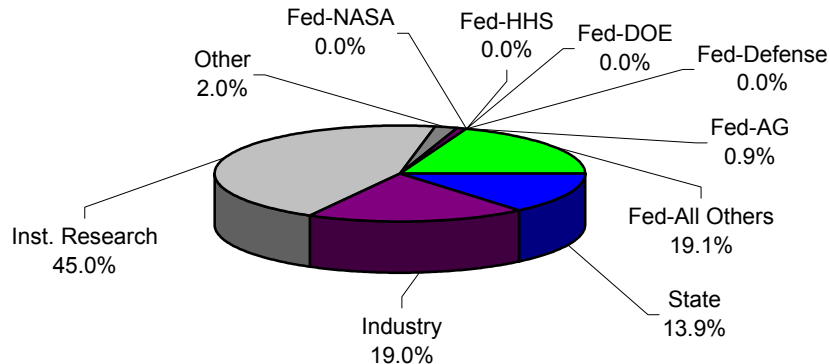
**Sources of Research Expenditures at USU, June 2003 YTD**  
**Fiscal Year 2003**  
**\$140,654,497**



**Sources of Scientific and Engineering Research Expenditures at USU, June 2003 YTD**  
**Fiscal Year 2003**  
**\$138,861,953**



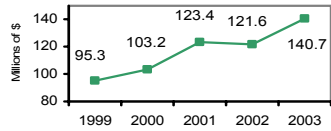
**Sources of Non-Scientific and Engineering Research Expenditures at USU, June 2003 YTD**  
**Fiscal Year 2003**  
**\$1,792,543**



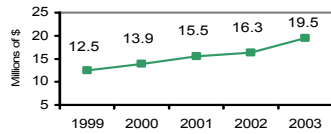
# USU RESEARCH PERFORMANCE DASHBOARD – OCTOBER 2003

## Research Funding

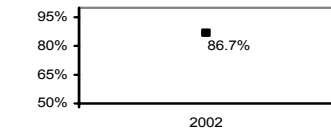
Total Research Expenditures<sup>1</sup>



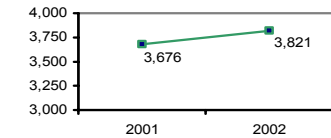
F&A (Indirect Costs) Recovered



Percent Recovered of Sponsor Allowed F&A<sup>2</sup>



USU Non-Student Research-Related Jobs

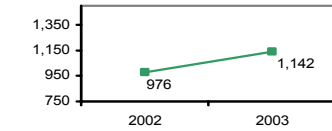


Funded Utah Centers of Excellence

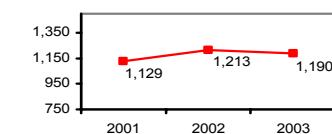


## Sponsored Programs

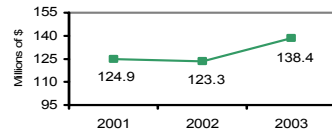
Number of Proposals Submitted<sup>3</sup>



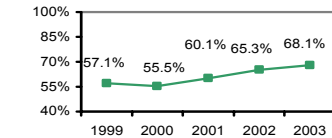
Number of Grants Awarded<sup>3</sup>



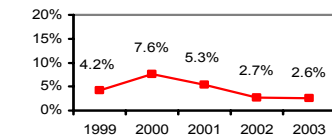
Total Amount of Contracts/Grants Awarded



Federal Funding as a Percent of Total Funding

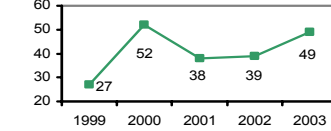


Industry Funding as a Percent of Total Funding

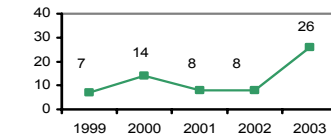


## Tech. Commercialization

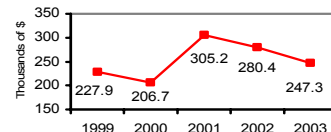
Number of Invention Disclosures



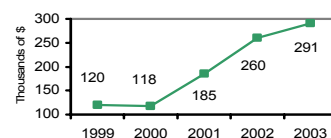
U.S. Patents Under Development



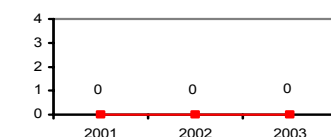
Gross License Income



Incubated Business Income

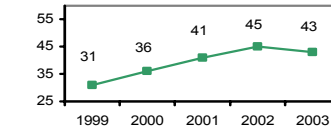


Number of New Start-Up Companies

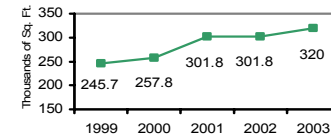


## Innovation Campus

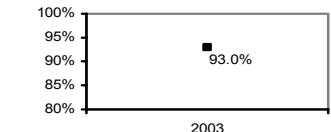
Tenants



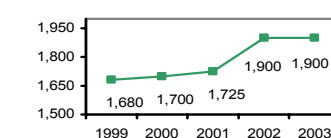
Total Square Feet



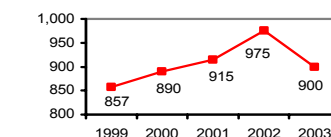
Percent Net Occupancy



Employees

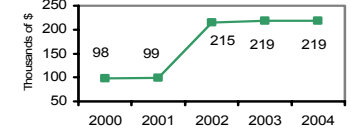


Student Employees

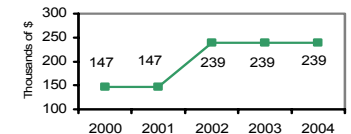


## Student Research

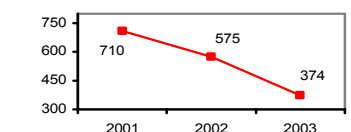
Funding for Undergraduate Research<sup>4</sup>



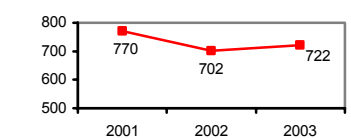
Funding for Graduate Research<sup>5</sup>



Undergraduate Research Employees



Graduate Research Employees



### TREND KEY:

- ▲ higher
- ▼ lower
- no change
- green = better
- red = worse
- black = neutral

### FOOTNOTES:

- <sup>1</sup> According to NSF Report
- <sup>2</sup> Sponsor Allowed F&A: Some funding agencies by policy limit the recovery of F&A costs to less than the negotiated rate.
- <sup>3</sup> One proposal can result in multiple awards.

<sup>4</sup> Undergraduate research funding includes: DR USU Presidential Scholarship Program, URCO funding, undergraduate research, and undergraduate scholarships and recruiting.

<sup>5</sup> Graduate research funding includes: fellowships, travel, and graduate student recruitment